Presentation Before the City of Aberdeen Planning Commission

March 10, 2021



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ABERDEEN, MARYLAND





TRAFFIC CONCEPTS, INC. Traffic Impact Studies • Feasibility • Traffic Signal Design • Traffic Counts • Expert Testimony









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 PROJECT NUMBER
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 SHEET ISSUE DATE
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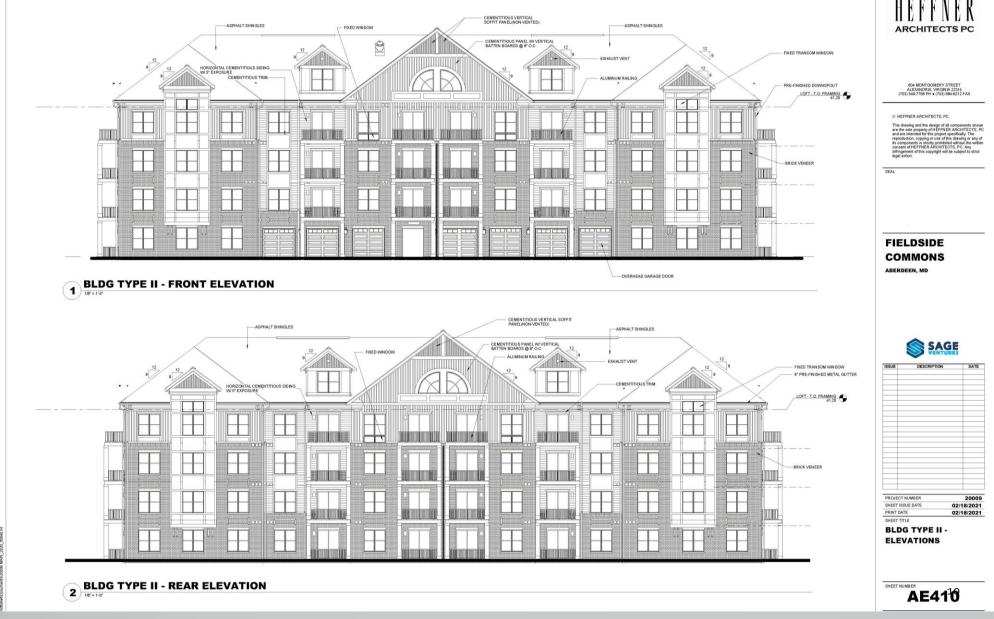
 SHEET TITLE

BLDG TYPE I -ELEVATIONS

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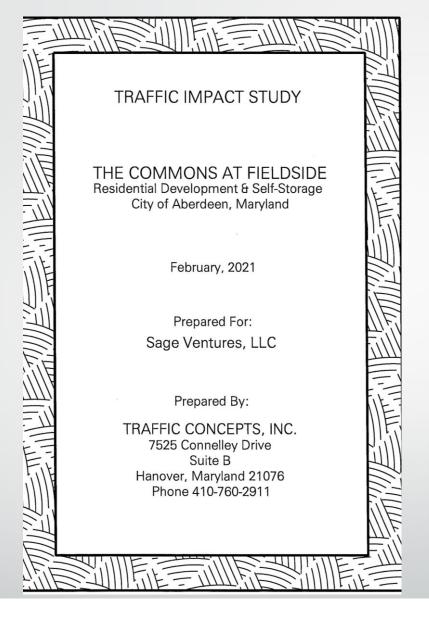
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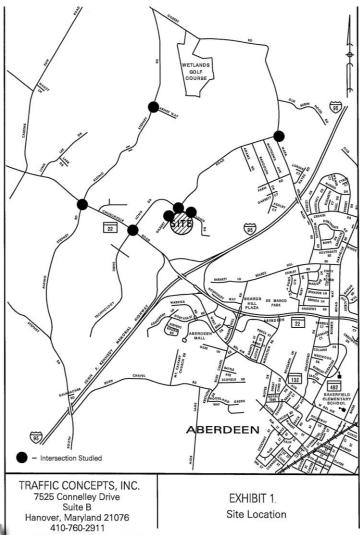
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INTRODUCTION

Traffic Concepts, Inc. has prepared a traffic impact study for The Commons at Fieldside project. The developer proposes to construct 484 apartment units and 49 townhouse units. Additionally, the developer proposes to repurpose the existing 117,792 SF building that was originally developed as an office building. This building has remained vacant since it was constructed and will now be used for self-storage.

The development property is located on the southeast quadrant of Gilbert Road and Long Drive. The property now has driveway access to Gilbert Road and two access points onto Long Drive. The developer plans to retain one full-movement access to Long Drive and create two access points onto Gilbert Road. The site is depicted on Exhibit 1 and the site plan is provided in the appendix.

The study was developed in accordance with the City of Aberdeen's Adequate Public Facilities Ordinance and the Maryland Department of Transportation State Highway Administration Traffic Impact Analysis Guidelines. The intersections listed below were determined by the City to be the key study intersections. These intersections were evaluated during the weekday AM and PM peak time periods.

Key Intersections

- MD 22 (Churchville Road) @ Technology Drive/Long Drive (Signalized)
- MD 22 (Churchville Road) @ Aldino-Stepney Road (Unsignalized)
- Long Drive @ Gilbert Road (Unsignalized)
- Gilbert Road @ Maxa Road (Unsignalized)
- Aldino-Stepney Road @ Arnet Way (Unsignalized)
- Gilbert Road @ Proposed Site Access (Unsignalized)
- · Long Drive @ Proposed Site Access (Unsignalized)

The existing condition diagrams for the key intersections are included in Appendix III of this report. The existing intersection lane use and the planned road improvements at the key intersections are shown on Exhibit 2.



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Traffic Impact Study Conclusions & Recommendations

CONCLUSIONS AND RECOMMENDATIONS

The City of Aberdeen's Adequate Public Facilities Ordinance defines the terms for intersection adequacy. The minimum acceptable level of service for a city intersection in a residential development study area is "C" for intersections in or abutting a residential district and "D" for all other intersections. The results of the study show that all key intersections meet the adequacy standards required by the City's APFO, with the exception of the MD 22 @ Aldino-Stepney Road intersection.

MD 22 @ Aldino-Stepney Road

The proposed development will not increase the volume of traffic along Aldino-Stepney Road nor will the proposed development increase the number of vehicles turning onto Aldino-Stepny Road from MD 22. However, the Highway Capacity Manual methodology determined the southbound Aldino-Stepny Road movement is a LOS "F" during the weekday AM and PM peak hour conditions. This "F" condition is the result of the southbound Aldino-Stepney Road left turn delay. From a Critical Lane Analysis standpoint, this intersection would continue to operate with a level of service of "D" or better during the future traffic conditions. The study findings are summarized in the tables below.

MD 22 @ Aldino-Stepne	y Road - Critical Lane Analysis	
	Aldino-Stepney Road SB Approach AM - Critical Trips (LOS)	Aldino-Stepney Road SB Approach PM - Critical Trips (LOS)
BACKGROUND	1035 (B)	1298 (C)
FUTURE	1048 (B)	1324 (D)

MD 22 @ Aldino-Stepney	Road - Highway Capacity Analys	sis	
	Aldino-Stepney Road SB Approach AM Delay (LOS)	Aldino-Stepney Road SB Approach PM Delay (LOS)	14
BACKGROUND	135.5 (F)	250.7 (F)	
FUTURE	163.6 (F)	319.2 (F)	

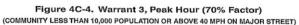
MD 22 @ Aldino-Stepney Road

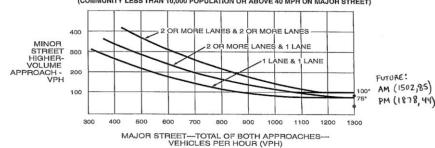
The southbound Aldino-Stepny Road approach provides a shared thru/right turn lane and a separate left turn lane. Based on the minimal southbound Aldino-Stepney Road volume, separate lanes for each movement would not mitigate the left turn delay. The southbound approach delay is a function of the heavy through volumes along MD 22. However, the MD 22 lane use includes left-turn bypass lanes that creates a queue free left turn condition along MD 22 in both directions. Additional MD 22 auxiliary lanes do not improve delay on the southbound approach.

Signal Warrant Test

A peak hour signal warrant analysis was conducted as an initial step to determine if signal control is warranted. The PM peak hour traffic volume does not satisfy the warrant. This indicates the side street volume would not meet the eight-hour warrant needed for signalization.

Future AM volume = 1502 (Major Street Volume of Both Approaches)
Future AM volume = 85 (Minor Street Higher Volume Approach)
Future PM volume = 1878 (Major Street Volume of Both Approaches)
Future MM volume = 44 (Minor Street Higher Volume Approach)





*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane. The peak hour signal warrant is not met during the weekday peak hour therefore it appears that traffic signal control is not warranted. Based on the findings of this report other than restricting the southbound left turn movement during the weekday peak hours, there are no geometric improvements to implement that would mitigate the southbound Aldino-Stepney Road approach delay.

Based on these results, we recommend approval of this development from a traffic-impact standpoint.





Thank you!